SANTA CRUZ BIOTECHNOLOGY, INC.

GAP1^{m} (C-17): sc-8702

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ras p21 can exist in either a physiologically quiescent GDP-binding state or a GTP-binding signal-emitting state. Interaction of Ras p21 with GTPase activating protein (GAP) can increase the rate of hydrolysis of Ras p21-bound GTP by as much as 1000-fold. In mitogenically activated and tyrosine kinase-transformed cells, Ras GAP forms a complex with a protein designated p190. At its amino terminus, p190 contains sequence motifs characteristic of all known GTPases, whereas the carboxy terminus contains sequences similar to those found in the Bcr gene product, n-chimerin and Rho GAP, all of which exhibit intrinsic GAP activity. Gap1^{m} is an additional protein with GTPase activating activity. Gap1^{m} contains a GAP catalytic domain, a phospholipid-binding region and a domain that shares homology with a unique domain of Btk. Gap1^{m} is most highly expressed in brain, placenta and kidney.

REFERENCES

1. Barbacid, M. 1987. Ras genes. Annu. Rev. Biochem. 56: 779-827.
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3. Vogel, U.S., Dixon, R.A.F., Schaber, M.D., Diehl, R.E., Marshall, M.S., Scolnick, E.M., Sigal, I.S. and Gibbs, J.B. 1988. Cloning of bovine GAP and its interaction with oncogenic Ras p21. Nature 335: 90-93
4. Bos, J.L. 1988. Ras oncogenes in human cancer: a review. Cancer Res. 49: 4682-4689.
5. Sanders, D.A. 1990. A guide to the low molecular weight GTPases. Cell Growth Differ. 1: 251-258.
6. Bourne, H.R., Sanders, D.A. and McCormick, F. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. Nature 348: 125-132.
7. Settleman, J., Narasimhan, V., Foster, L.C. and Weinberg, R.A. 1992. Molecular cloning of cDNAs encoding the GAP-associated protein p190: implications for a signaling pathway from Ras to the nucleus. Cell 69: 539-549.

CHROMOSOMAL LOCATION

Genetic locus: RASA2 (human) mapping to 3q22-3q23; Rasa2 (mouse) mapping to 9 E4.

SOURCE

GAP1^{m} (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GAP1^{m} of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8702 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

GAP1^{m} (C-17) is recommended for detection of GAP1^{m} of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GAP1^{m} (C-17) is also recommended for detection of GAP1^{m} in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GAP1^{m} siRNA (h): sc-41704, GAP1^{m} siRNA (m): sc-41705, GAP1^{m} shRNA Plasmid (h): sc-41704-SH, GAP1^{m} shRNA Plasmid (m): sc-41705-SH, GAP1^{m} shRNA (h) Lentiviral Particles: sc-41704-V and GAP1^{m} shRNA (m) Lentiviral Particles: sc-41705-V.

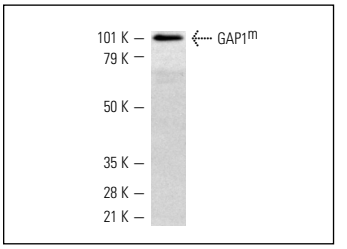
Molecular Weight of GAP1^{m}: 102 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GAP1^{m} (C-17): sc-8702. Western blot analysis of GAP1^{m} expression in A-431 whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.